Name(s) of Risk Team Members: Joel Scott, A. Korol, A. Anderson, R. Johnson, R. Medina, J. Tabbaco	Point Value → Parameter ↓	1	2	3	4	5
Area/Facility Description Title: Site Wide Material Handling (Moving shield blocks from 912 to 1004) Area/Facility # (if applicable): Facility-Wide FRA 7-06	Occupancy or Use	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Area/Facility Description: Collider Accelerator Department	Severity	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
Approved by: *E. Lessard* Date: 1-30-06 Rev.#: 0	Likelihood	Extremely Unlikely	Unlikely	Possible	Probable	Multiple
Reason for Revision (if applicable):				Comments:		

			Before Additional Controls					After Additional Controls				
Physical Item or Activity	Hazard(s)	Control(s)	**Occupancy A**	**Severity B**	**Likelihood C**	**Risk* AxBxC**	Control(s) Added to Reduce Risk	**Occupancy A**	**Severity B**	**Likelihood C**	**Risk* AxBxC**	% Risk Reduction
Moving Items with Cranes	Being struck by an object, such as a tool falling on a worker from above	Training, daily crane inspections prior to use, PE crane maintenance, PPE, certified rigging equipment, Tier 1, yearly rigging inspections, load weights and center of gravity known prior to lift, procedures, qualified riggers if required, critical lift and engineered lift requirements and reviews, warning alarms, postings, work planning, load testing, barriers, C-AD OPM 1.25 for leading edge work	4	5	2	40						
Mobile crane use	Being struck by an object, such as a tool falling on a worker from above	Training, daily crane inspections prior to use, PE crane maintenance, PPE, certified rigging equipment, Tier 1, yearly rigging inspections, load weights and center of gravity known prior to lift, procedures, critical lift and engineered lift requirements and reviews, warning alarms, postings, work planning, load testing, barriers, certified HEMO operators and riggers only, seat belts, PE Rigging Supervisor review, C-AD OPM 1.25 for leading edge work	4	5	2	40						
Mobile crane use	Highway accidents, such as tip-over or traffic accident	Training, daily crane inspections prior to use, PE crane maintenance, PPE, certified rigging equipment, Tier 1, yearly rigging inspections, load weights and center of gravity known prior to lift, procedures, critical lift and engineered lift requirements and reviews, warning alarms, postings, work planning, load testing, barriers, certified HEMO operators and riggers only, PE Rigging Supervisor review, outriggers on crane, alarms and indications in cab, escort for movement, seat belts	4	4	2	32						
Fork truck use	Being struck by an object, such as a falling load	Training, daily fork truck inspections, PPE, seat belts, Tier 1 inspections, PE inspections and maintenance, required items strapped to mast, load weight and center of gravity known, work planning, postings, alarms, certified riggers available, escort for transport if required, road surface maintenance, riggers and C-Ad staff retraining, DOE ISM audit recommendations implemented, OSHAS implementation has heightened awareness.	4	4	2	32						

Fork truck use	Highway accidents, such as tip-over or traffic accident	Training, daily fork truck inspections, PPE, seat belts, Tier 1 inspections, PE inspections and maintenance, required items strapped to mast, load weight and center of gravity known, work planning, postings, alarms, certified riggers available, escort for transport if required, road surface maintenance, spotter, backing-up alarms, increased awareness of securing loads, traffic enforcement increased	4	4	2	32						
Miscellaneous rigging equipment use (come-alongs, lifting fixtures, a-frames, Johnson bars, skates, etc.)	Being struck by an object, such as a falling load or tool	Certified inspected equipment, training, work planning, engineering review and witnessed load tests, PPE as required, certified riggers as required, load weights and center of gravity known, postings labeling riggers and C-Ad staff retraining, DOE ISM audit recommendations implemented, OSHAS implementation has heightened awareness.	4	4	2	32						
Miscellaneous rigging equipment use (come-alongs, lifting fixtures, a-frames, Johnson bars, skates, etc.)	Overexertion – injuries caused by excessive lifting, pushing, pulling, holding, carrying or throwing of an object	Certified inspected equipment, training, work planning, engineering review and witnessed load tests, PPE as required, certified riggers as required, load weights and center of gravity known, postings labeling, new ergonomics training available and encouraged for all workers.	4	4	2	32						
Manual material handling (pallet jacks, barrel and equipment carts, etc,)	Being struck by an object, such as a falling load or tool	Training, certified equipment, PPE as required, limited to load carrying limit of equipment, postings, tier 1,procedures, specific back injury prevention training, work planning , certified riggers if required, manual lift weight limit	5	3	3	45						
Manual material handling (manual lift or pallet jacks, barrel and equipment carts, etc,)	Overexertion – injuries caused by excessive lifting, pushing, pulling, holding, carrying or throwing of an object	Training, certified equipment, PPE as required, limited to manual lift weight limit or load carrying limit of equipment, postings, Tier 1 inspections, procedures, specific back-injury prevention training, work planning, certified riggers if required. OSHAS 18001 raised awareness with regards to sprains, and strains. WOSH committee involvement in first aid events, department group 5-minute group safety meetings new ergonomics training available and encouraged for all workers.	4	4	2	32						
Transportation of small equipment in lab vehicles	Being struck by an object, such as a falling load or tool	Training, lab vehicles rated for load, procedures, loads secured in trucks, certified riggers if required, work planning, chemicals and radioactive materials in proper containers and labeled, vehicle maintenance, speed limits, traffic rules, snow removal, vehicle inspections	4	3	3	36						
Transportation of small equipment in lab vehicles	Highway accidents, such as traffic accident	Training, lab vehicles rated for load, procedures, loads secured in trucks, certified riggers if required, work planning, chemicals and radioactive materials in proper containers and labeled, vehicle maintenance, speed limits, traffic rules, snow removal, vehicle inspections, increased awareness of securing loads, traffic enforcement increased	4	4	2	32						
Transportation of large items on trucks, lab and outside vehicles	Being struck by an object, such as a falling load or tool	Training, certified riggers to load vehicle, tie downs inspected prior to use, chocking and blocking by PE carpenters, SBMS subject areas for chemical and radioactive transports, DOT transport rules, work planning, supervisor oversight, escorts as required, postings and labeling as required, PPE as required, vehicle maintenance, traffic rules, snow removal, road barriers, vehicle inspections	4	3	3	36	Effort to install positive tie down points for loads in all Laboratory vehicles.	4	3	2	24	33%
Transportation of large items on trucks, lab and outside vehicles	Highway accidents, such as traffic accident	Training, lab vehicles rated for load, procedures, loads secured in trucks, certified riggers if required, work planning, chemicals and radioactive materials in proper containers and labeled, vehicle maintenance, speed limits, traffic rules, snow removal, vehicle inspections, spill response and emergency aid response onsite. SBMS on Transportation. , increased awareness of securing loads, traffic enforcement increased	4	3	3	36						

Further Description of Controls Added to Reduce Risk:					
*Risk:	0 to 20	21 to 40	41-60	61 to 80	81 or greater
	Negligible	Acceptable	Moderate	Substantial	Intolerable